

Application No. 10/623,733
Reply to Office Action of May 2, 2006

Docket No.: 00155-00388-US

REMARKS

Claims 1-17 and 26-40 are currently pending in the instant application.

At the outset, Applicants and their undersigned representatives would like to thank the Examiner for his courtesy and the opportunity to discuss the instant application during the Interview on August 16, 2006. During the Interview, Applicants' representative described various experiments carried out by Applicants using the components in the coating compositions of the cited references which were identified by the Examiner as allegedly being acid-stable. In each of the experiments, Applicants evaluated whether the cited components qualified as "acid-stable" as that term is used in Applicants' Specification. The results of those experiments, in the form of photographs (now attached to the Fristad Declaration), indicating that the components identified by the Examiner are NOT acid-stable were also shown to the Examiner. At the conclusion of the Interview, Applicants' representative and the Examiner agreed that the data would be submitted in the form of a declaration under 37 C.F.R. §1.132. The Fristad Declaration, including the photographs shown during the interview, is submitted herewith and describes those experiments.

Claims 18-25 have been canceled without prejudice to the filing of one or more divisional applications directed to the subject matter thereof. Claims 6, 9, 27-30 and 37 have been amended to correct the informalities recited by the Examiner in the Office Action at ¶10. The amendments to the claims introduce no new matter. A complete listing of all claims ever presented in accordance with 37 C.F.R. §1.121(c)(1) is set forth herein. Accordingly, entry of the claim amendments made herein is proper and respectfully requested.

Based on the amendments made herein to claims 6, 9, 27-30 and 37, Applicants respectfully submit that each of the Examiner's objections has been addressed. Accordingly, removal of the Examiner's objections is respectfully requested.

The Specification has been amended to update Applicants' claim of domestic priority to reflect issuance of the previously copending U.S. patent application of which the instant application is a child application. The amendment to the Specification introduces no new

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matter and is set forth in accordance with 37 C.F.R. §1.121(b). Accordingly, entry of the amendment to the Specification is proper and respectfully requested.

In the Office Action, the Examiner rejects claims 1, 10-17, 26 and 31-35 under 35 U.S.C. §102(b) or §102(e), as being anticipated by each of U.S. Patent No. 5,427,632 of Dolan ("Dolan '632"); U.S. Patent No. 5,356,490 of Dolan, *et al.* ("Dolan '490"); U.S. Patent No. 5,281,282 of Dolan, *et al.* ("Dolan '282"); U.S. Patent No. 5,449,415 of Dolan ("Dolan '415"); U.S. Patent No. 5,897,716 of Reghi, *et al.* ("Reghi '716"); U.S. Patent No. 6,464,800 of Carlson, *et al.* ("Carlson '800"); and U.S. Patent No. 6,764,553 of Dolan ("Dolan '553"). Additionally, the Examiner rejects claims 5 and 36-40 under 35 U.S.C. §102(b), as being anticipated by Carlson '800.

In each of the Examiner's anticipation rejections, the Examiner contends that the reference in question teaches a coating composition containing an ingredient which can be considered "acid-stable" particles. For example, with respect to Dolan '632 and Dolan '415, the Examiner contends that the cations disclosed in the reference can be considered acid-stable particles. With respect to Dolan '490 and Dolan '282, the Examiner contends that the oxides, hydroxides or carbonates of silica, aluminum or zirconium can be considered acid-stable particles. The Examiner makes similar contentions with respect to components disclosed in each of Reghi '716, Carlson '800 and Dolan '553.

Applicants respectfully traverse the Examiner's rejections under 35 U.S.C. §102, and the arguments and contentions set forth in support thereof in the Office Action for the following reason. As explained below, and previously during the above-referenced interview with the Examiner, and as evidenced in the Fristad Declaration, none of the cited references teaches a coating composition containing acid-stable particles, as claimed.

One embodiment of Applicants' claimed invention is directed to a coating composition which comprises an aqueous mixture *comprising acid-stable particles* and one or more fluoroacids, wherein the amount of the acid-stable particles in the coating composition is from 0.005% to 8% by weight on a dry weight basis.

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In order to support the rejection of a claim as being anticipated under §102, a single prior art reference must teach, either expressly or inherently, each and every element of Applicant's claimed invention. (See, M.P.E.P. §2131). None of the cited references teaches a coating composition comprising acid-stable particles, as claimed.

Dolan '632 and Dolan '415 are related and are both directed to coating compositions containing fluorometallate anions (component A), metal cations (component B); phosphate anions or phosphorous-containing inorganic oxyanions (component C), a polymer resin (component D), acid and one or materials of oxides, hydroxides and carbonates (component G). The metal cations of component B exist in the aqueous acidic compositions as solvated cations. For example, the carbonates and oxides of various metals added in Table 1 of Dolan '632 are dissolved. (Dolan '632, col. 8, lines 23-28). The metal cations result from the dissolution of the metal compounds originally added to the composition. As they undergo a noticeable change, they are not acid-stable particles.

Dolan '632 and Dolan '415 also disclose the preparation of coating compositions which contain a silica, namely Cab-O-Sil® M5. As discussed in the Fristad Declaration, neither Cab-O-Sil® M5 or any of the metal components qualify as acid-stable particles as that term is used in the instant application. Evaluation of Cab-O-Sil® M5 under the parameters described at pages 14 and 15 of the Specification show a significant change in viscosity, indicating a lack of acid-stability.

Accordingly, Applicants respectfully submit that neither Dolan '632, nor Dolan '415, anticipates the claimed invention as neither reference teaches acid-stable particles.

Dolan '490 and Dolan '282 are related and are both directed to coating compositions containing metallic and/or metalloid elements and/or their oxides, hydroxides, and/or carbonates selected from silicon, zirconium and/or aluminum, preferably silica. "Any form of this compound that is sufficiently finely divided *to be readily dispersed* in water." (See, Dolan '490, col. 3, lines 62-68 (emphasis added)). "Solutions and/or sols such as silicic acid sols may be used. . . generally most preferred to use dispersions of silica made by pyrogenic processes." (See, *id.* at col. 4, lines 8-13). The '490 patent also describes the preparation of

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coating compositions that contain amorphous fumed silica, Aerosil® R-972 (a surface treated dispersed silica), or Cab-O-Sil® M5 and ZrO₂. (See, e.g., Dolan '490, Examples 1-10).

None of the metallic and/or metalloid elements and/or their oxides, hydroxides, and/or carbonates disclosed in Dolan '490 or Dolan '282 is an acid-stable particle as used in the instant application. As discussed in the Fristad Declaration, metal carbonates exist in the acidic solutions of the cited references at dissolved ions, having undergone a noticeable change subsequent to their addition to the aqueous acidic media. (See, Fristad Declaration, ¶ 9). Additionally, each of Cab-o-Sil® amorphous formed silica, Cab-o-Sil® M5 and Aerosil® R-972 is evaluated in the Fristad Declaration and shown to undergo a significant viscosity change upon standing over 96 hours at room temperature. (See, Fristad Declaration, ¶¶ 4-6). As discussed in the Fristad Declaration, these silicas are not acid-stable.

Carlson '800, though not related by priority to Dolan '490 or Dolan '282, contains a disclosure similar to the two references and describes compositions containing the same allegedly acid-stable components. Similarly, Dolan '553, though not related by priority to Dolan '490 or Dolan '282, contains a disclosure similar to the two references. As set forth in the preceding paragraph, none of the particles described is an acid-stable particle.

Accordingly, Applicants respectfully submit that none of Dolan '490, Dolan '282, Carlson '800 or Dolan '553 anticipates the claimed invention as neither reference teaches acid-stable particles.

Reghi '716 is directed to coating compositions which can contain components similar to the four previously addressed Dolan patents. As discussed above, the oxides, hydroxides, and/or carbonates of various metals and semi-metals disclosed in Reghi '716 are not acid-stable particles. As can be seen from col. 9, lines 50-65 of Reghi '716, the amorphous fumed silica disclosed is Cab-o-Sil® M5 which is shown in the Fristad Declaration as not being acid-stable. In fact, Reghi '716 specifically notes that the components are mixed and subjected to mechanical agitation to dissolve them in order to provide an optically clear solution. Moreover, as discussed in ¶ 10 of the Fristad Declaration, the polymers disclosed in Reghi '716 are also not acid-stable particles. There is no disclosure in Reghi '716 regarding the inclusion of

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acid stable particles. Accordingly, Applicants respectfully submit that Reghi '716 fails to anticipate the claimed invention.

Finally, the Examiner has provisionally rejected claims 1-17 and 26-40 under the judicially-created doctrine of obviousness-type double patenting over U.S. Pat. App. No. 10/339,405. As indicated in the Amendment to the Specification made herein, the application has issued as U.S. Pat. No. 7,063,735 ("the '735 patent). Applicants respectfully traverse the Examiner's rejection (which would presumably no longer be provisional in the next action) and the arguments and contentions set forth in support thereof.

Applicants respectfully submit that claims 1-17 and 26-40 are not obvious in light of claims 1-26 of the '735 patent. This rejection fails under the two way obviousness test set forth in §804 of the M.P.E.P. The claims are mutually exclusive. Claims 1 and 26 of the present application, from which all other pending claims depend either directly or indirectly, require the presence of acid-stable particles in an amount of from 0.005% to 8% by weight on a dry weight basis. Claims 1, 14 and 23 of the '735 patent, from which all other claims depend, do not require any particular amount of an acid-stable component, and DO require a catechol compound. Accordingly, a coating composition may simultaneously fall within the scope of the claims of the instant application and be outside the scope of the claims of the '735 patent, and *vice versa*. Accordingly, the Examiner's double-patenting rejection is improper. Reconsideration and withdrawal is respectfully requested.

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In view of the remarks set forth above and in conjunction with the evidence set forth in the Fristad Declaration, Applicants submit that the claims patentably distinguish over the prior art of record and known to Applicants. Accordingly, reconsideration, withdrawal of the rejections and a Notice of Allowance are respectfully requested.

Respectfully submitted,

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